

FIG. 1

Application No. 09/904,009
Title: Switched Interconnection Network ...

Inventors:

Philip P. Carvey

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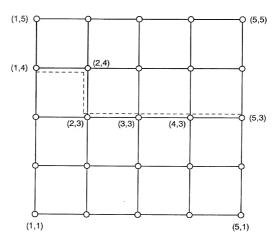


FIG. 2

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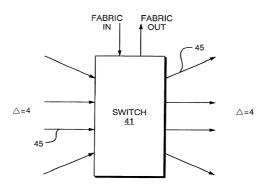


FIG. 3

DESIGNATION NOT THE

Application No. 09/904,009

Title: Switched Interconnection Network ...

Inventors: Philip P. Carvey

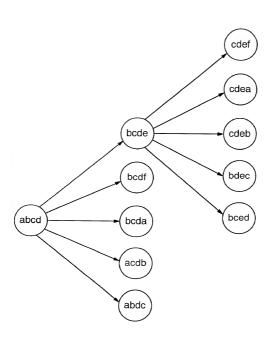


FIG. 4A

Docket No.: 2390.2003-000

Title: A Switched Interconnection Network ...

Inventors: Philip P. Carvey

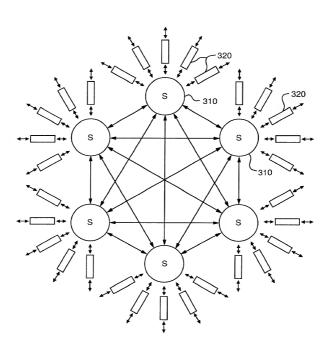
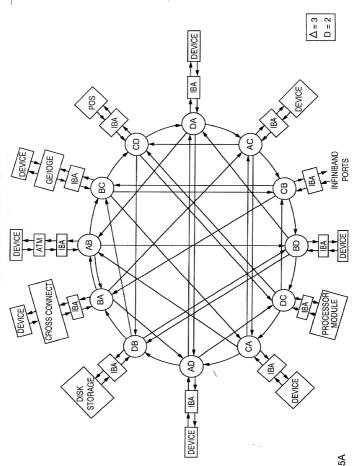


FIG. 4B

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AB → BC AB → BD AB → BA	AC AC → CB AC → CD AC → CA	AD AD → DB AD → DC AD → DA
BA BA → AC BA → AD BA → AB	BC BC → CD BC → CA BC → CB	BD BD → DA BD → DC BD → DB
CA CA → AB CA → AD CA → AC	CB → BD CB → BA CB → BC	CD CD → DA CD → DB CD → DC
DA DA → AB DA → AC DA → AD	DB DB → BA DB → BC DB → BD	DC DC - CA DC - CB DC - CD

FIG. 5B

Application No. 09/904,009
Title: Switched Interconnection Network ...

Inventors: Philip P. Carvey

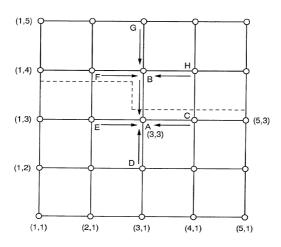
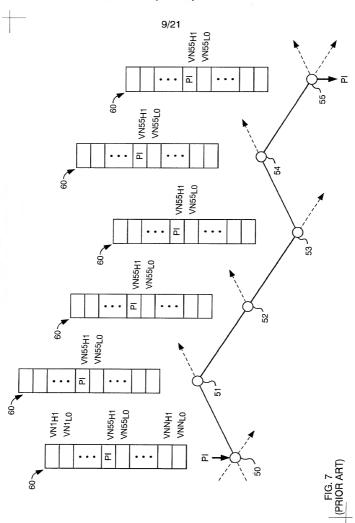


FIG. 6

Inventors: Philip P. Carvey



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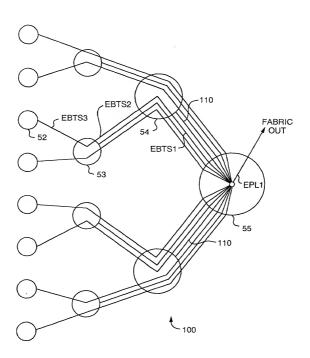


FIG. 8A

Application No. 09/904,009
Title: Switched Interconnection Network ...

Inventors: Philip P. Carvey

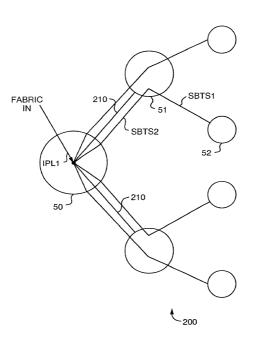
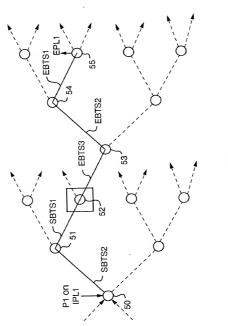
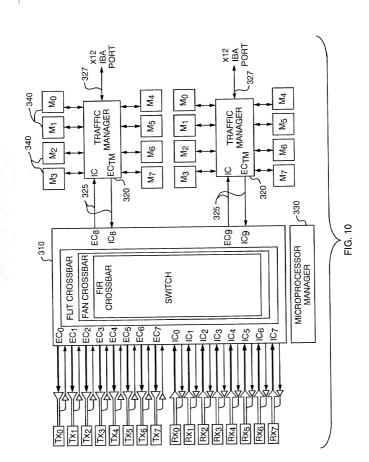


FIG. 8B

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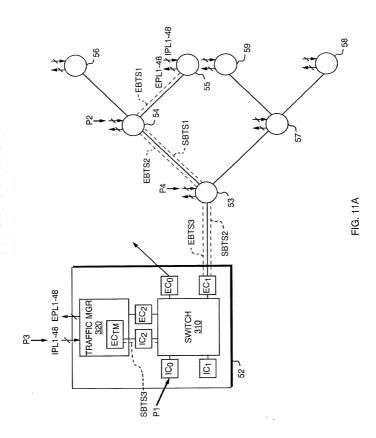
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DESCRIPTION OF THE

Application No. 09/904,009
Title: Switched Interconnection Network ...
Inventors: Philip P. Carvey

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Docket No.: 2390.2003-000

Title: A Switched Interconnection Network ...

Inventors: Philip P. Carvey

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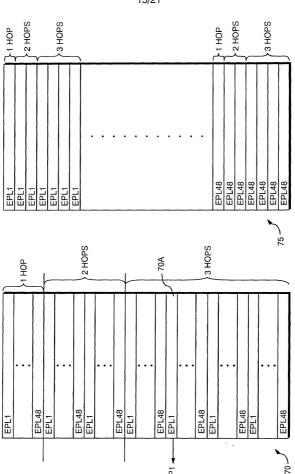


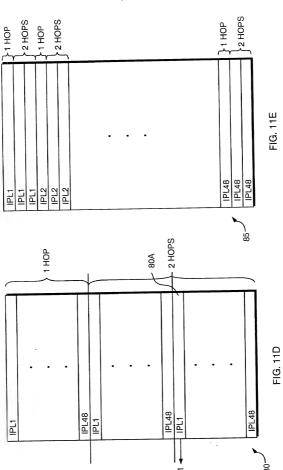
FIG. 11B

FIG. 11C

Application No. 09/904,009

Title: Switched Interconnection Network ...

Inventors: Philip P. Carvey



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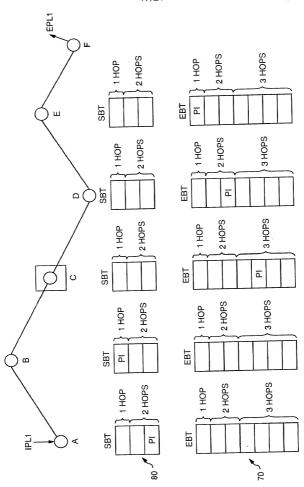
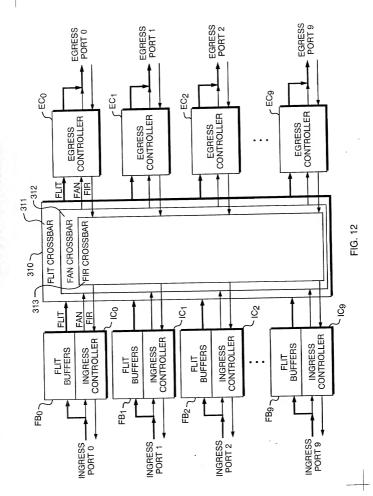


FIG. 11F

Philip P. Carvey Inventors:

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Application No. 09/904,009

Title: Switched Interconnection Network ...

Inventors: Philip P. Carvey

CONTROL STRUCTURE	SIZE (IN BITS)	DESCRIPTION
IngressPacketState	1280x35=44,800	EACH IngressPacketState STRUCTURE MANAGES THE STORAGE OF A PARTIALLY RECEIVED PACKET ON ONE OF THE INGRESS PORTS.
EgressLaneState	(128x30=3,480)	EACH EgressLaneState STRUCTURE SUPPLIES INFORMATION USED TO PROCESS RECEIVED CREDITS.
AvailableEgressLane	(128x1)	EACH FLAG INDICATES THAT A PARTICULAR LANE IS AVAILABLE OR IN USE.
FanState	(512x44=22,528)	EACH FANSTATE STRUCTURE HOLDS ONE FAN WAITING TO BE CONVERTED INTO A FIR AND POINTERS WHICH ALLOW CREATING A LINKED LIST OF PACKETS WAITING ON A PARTICULAR CHANNEL AND A LINKED LIST OF FANS COMPRISING A PARTICULAR PACKET.
AvailableFanState	(512x1)	EACH FLAG INDICATES THAT A PARTICULAR LOCAL FANSTATE STRUCTURE IS AVAILABLE OR IN USE.
WaitingForLanes	(2928x1)	EACH FLAG INDICATES THAT A PARTICULAR TUNNEL SEGMENT HAS A PACKET READY TO BE ASSIGNED TO A LANE AS SOON AS ONE BECOMES AVAILABLE.
WaitingForFSM	(2928x1)	EACH FLAG INDICATES THAT A PARTICULAR CHANNEL HAS A FAN READY TO BE COVERTED INTO A FIR AS SOON AS THE EgressController HAS BANDWIDTH AVAILABLE TO PERFORM THE CONVERSION.
WaitingForFirFifo	(2304x1)	EACH FLAG INDICATES THAT A PARTICULAR LANE HAS A FAN READY TO CONVERT INTO A FIR AS SOON AS ROOM IN THE FIR FIFO BECOMES NON-FULL.
SegmentPointer	(2938x13=38,194)	EACH SegmentPointer POINTS TO A QUEUE OF PACKETS WAITING ON A TUNNEL SEGMENT.

FIG. 13

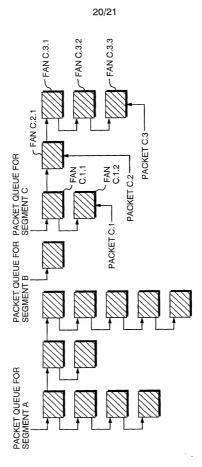


FIG. 14

Application No. 09/904,009 Title: Switched Interconnection Network .. Inventors: Philip P. Carvey FIRS TO IngressController 6 IngressController 9 IngressController 7 IngressController 8 IngressController 5 IngressController 4 IngressController 3 ingressController 2 IngressController 1 IngressController 0 21/21 FIRS TO FIRFIFO0 h FIRFIF08 FIRFIF04 FIRFIFO6 FIRFIF02 7400 FIRFIF09 FIRFIF05 FIRFIF03 FIRFIFO7 FIRFIF01 420 LANE STATE MEMORY PROCESSOR GENERATOR 123x456 450 FIRFIE 490 - 500 MEMORY FIR WAITING STATE 123x456 470 -480 PROCESSOR PROCESSOR FLIT STATE MEMORY 123x456 440 FIG. 15 CREDIT FAN 4 460 SELECTOR STATE MEMORY 123x456 QUEUE SEGMENT PACKET 2938x13 FAN 430 ⁄ FANFIF09 FANFIF05 FANFIF03 FANFIFO1 FANFIF07 CREDIT : FANFIFO8 FANFIF06 FANFIFOO FANFIF04 FANFIF02 ngressController 9 ngressController 8 ingressController 6 ngressController 5 ngressController 3F ngressController 2 Ingresscontroller 1 FANS FROM ingressController 0 ingressController 7 ngressController 4 FANS FROM — FANS FROM __ FANS FROM FANS FROM T FANS FROM -FANS FROM _ FANS FROM T -ANS FROM -FANS FROM